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ABSTRACT

This manual for home economics teachers contains eight sample lessons on health issues related to population growth. Among the topics treated are nutrition, family health, communicable diseases, causes of high mortality, and community health services. Lessons are designed for lower primary through high school students. A scope and sequence chart depicts how teachers can integrate population-related concerns into the health curriculum. These activities were adapted from materials prepared in several countries in Asia and Oceania. (WB)

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Population Education Programme Service

population education in HEALTH

some sample lessons

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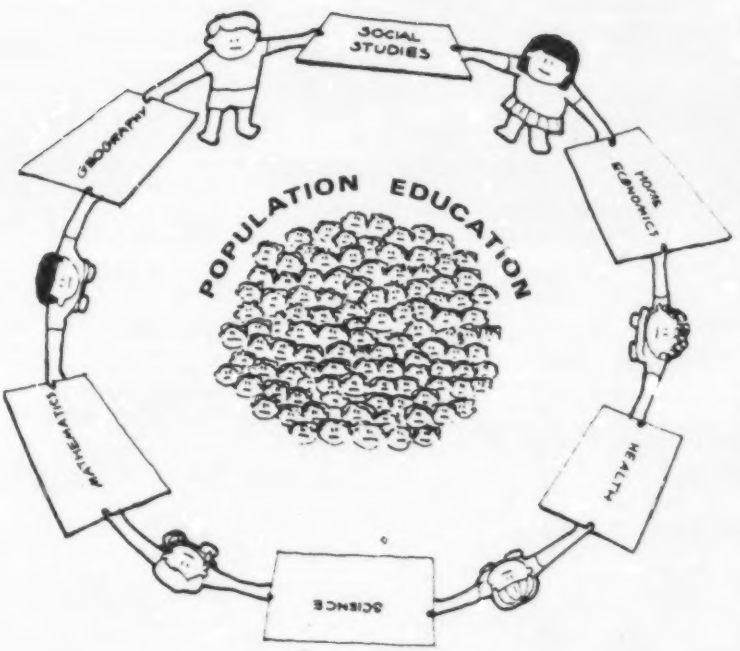

UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA AND OCEANIA
Bangkok, Thailand, 1980

SE 032 869

POPULATION EDUCATION IN HEALTH

Rapid population growth and migration are vital processes affecting not only the provision of health services within a society and nation but also the level of health of the population. The health of a population determines its capacity to produce, its capacity to benefit from education, and its ability to derive income from employment. In turn, the effectiveness of health facilities and services can influence population growth and distribution.

Below are some examples of interrelationships between health and urbanization and the study of population:

1. Communicable diseases and its control - It has long been recognized that acute community infections such as rubella, influenza, cholera, mumps and chicken pox are specific to human populations and have no hosts other than man. It is also believed that for these infections to flourish, very large and densely settled populations are required. It is also apparent that some diseases like the plague are largely urban diseases. The process of urbanization has facilitated their development and spread.

2. Community and environmental health - In almost all developing countries, the health status of rural population is very low. This has been ascribed to very low level provision of health services and inadequate health education being given to the population. This condition is transported to the urban areas by rural folks who migrate to urban places while still retaining their rural customs with regard to health practices. This transfer of place, residence and employment from the rural to urban areas contribute to environmental deterioration and creation of health hazards. These factors reinforce the already poor health status of the migrant people living in urban areas.

3. Income-health - There are well-established correlations between health, status of population, education and income, just as there are established links between health status and income. Those countries with income above average have by and large, better access to high quality foodstuffs (proteins) and to quality medical services. There is also the tendency that those in higher income brackets have larger amounts of information or greater knowledge about many health issues. Therefore, education appears to be significant among an intervening set of factors which affect the health practices of the people.

4. Mortality - Studies have revealed that mortality decline has been attributed to the following factors: (a) a significant increase in the dietary consumption levels of low income families; (b) an increase in the general income levels thus enabling better access to high quality foods, better clothing and better housing; (c) an active housing government policy directed at those with low income; (d) the development of safe water supplies and the extension of sewage systems and (e) the campaign to develop safe waste disposal systems and educational campaigns aimed at increasing environmental cleanliness and making all citizens aware of having regular chest X-rays and other medical examinations.

5. Migration and urbanization - It has been shown that migrant populations often lack skills useful in urban areas and are thus able to gain employment only in jobs with low wages. Many are unable to earn an income sufficient to ensure either satisfactory living conditions or adequate diet. As a result migrants remain malnourished and more susceptible to a range of infectious diseases. In some cases, the opposite happens. This migration may improve instead the health status of the migrants because of the availability of health services in the urban area. However, the increase in urban population due to migration also increases the need for health services and which makes existing and available health resources insufficient to meet the demands of the growing population.

These and other health issues can be used as entry points in discussing population education concepts.

2. POPULATION EDUCATION IN HEALTH

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II. SCOPE AND SEQUENCE OF POPULATION EDUCATION CONCEPTS AS INTEGRATED INTO HEALTH AND PHYSICAL EDUCATION SUBJECT: CONSOLIDATED FROM SCOPE AND SEQUENCE OF HEALTH AND PHYSICAL EDUCATION SYLLABI OF SELECTED ASIAN COUNTRIES

(India, Indonesia, Malaysia, Pakistan, Philippines, Republic of Korea, Sri Lanka, Thailand)

CONCEPTS	SUB-CONCEPTS	OBJECTIVES	GRADE LEVEL			
			Elementary		Middle Level	High School
			Lower	Upper		
A. FAMILY HEALTH AND SIZE AS RELATED TO FOOD NEEDS AND NUTRITION	1. Concept of food values, food groups and nutrients sources, daily food requirements.* 2. Dietary habits. 3. Malnutrition and undernutrition. 4. Growth of children and caloric intake of nutrition.	1. To develop understanding of the impacts of malnutrition and poor quality of foods upon health in relation to population growth.		X		
		2. To develop understanding of the concepts of food values, food groups and daily food requirements.		X		
		3. To realize that shortage of food leads to undernutrition and malnutrition.		X		
B. FAMILY SIZE AND PHYSICAL, EMOTIONAL AND SOCIAL HEALTH	1. Family role and size and its effects upon the emotional and social health of the family members.*	1. To develop understanding of the relations between the number of children and the health of family members.	X	X	X	
	2. Population congestion and emotional fatigue and mental diseases. 3. Space and overcrowding affect physical health.	2. To acquaint students with the harms of the impact of population congestion on mental health.		X	X	
C. COMMUNICABLE DISEASES AND CONTROL OF DISEASES	1. Population congestion and communicable diseases.* 2. Communicable disease control. 3. Trends in mortality.*	1. To understand causes of and changes in mortality and appreciate the factors that contribute to decline in mortality.		X	X	

CONCEPTS	SUB-CONCEPTS	OBJECTIVES	GRADE LEVEL			
			Elementary		Middle	High
			Lower	Upper	Level	School
		2. To identify ways and means of controlling diseases.		X	X	
D. PERSONAL HYGIENE AND ENVIRONMENTAL SANITATION	1. Environmental health and population. 2. Personal hygiene, sanitary treatment of menstruation.* 3. School sanitation, home sanitation, community sanitation.* 4. Number of students and sanitation problem. 5. Effects of environment pollution upon human body.	1. To develop understanding of the effects of population increase on the sanitary environment and the health of people at large. 2. To develop understanding on the effects of number of students and community population on the home, school and community sanitation. 3. To realize the effects of environmental pollution upon the human body.	X X X	X X X	X X X	
E. GROWTH AND DEVELOPMENT	1. Implications of basic needs in the growth of children. 2. Number of children in the family and body development. 3. Number of population and body development.	1. To develop understanding of the impacts of population growth on body growth and development. 2. To realize that the number of children in the family affect body development considering scarce resources.		X X		
F. FIRST AID AND SAFETY	1. Population congestion and traffic accident. 2. Population congestion and fire accident. 3. Safety measures for accidents. 4. Population congestion and safety.	1. To develop understanding of the varied forms of accidents and their harms as caused by population size and congestion. 2. To identify various safety measures to prevent accident caused by population congestion.		X X	X X	

CONCEPTS	SUB-CONCEPTS	OBJECTIVES	GRADE LEVEL			
			Elementary		Middle Level	High School
			Lower	Upper		
G. MORTALITY CHANGES AND TRANSITION	1. Trends in mortality. 2. Causes of high mortality.* 3. Causes of mortality decline.* 4. Relation of mortality to population growth. 5. Measures of mortality. 6. Health programme to reduce mortality.	1. To identify the mortality transition over time. 2. To identify the causes of mortality transition and decline in mortality. 3. To identify measures of mortality. 4. To become aware of health programmes to reduce mortality.			X X X X	X X X X
H. FECUNDITY, FERTILITY AND STERILITY	1. Biological determinants of fertility. 2. Social, psychological determinants of fertility. 3. Social, psychological determinants of sterility.	1. To develop knowledge and understanding of the determinants of fertility and how these affect fertility behaviour. 2. To explain social, psychological and biological factors affecting fertility and sterility.			X X	X X
I. RAPID POPULATION GROWTH AND COMMUNITY HEALTH	1. Food shortage and malnutrition.* 2. Housing problem.* 3. Overcrowding. 4. Environmental sanitation problem.	1. To understand some of the consequences of rapid population growth that affect directly man's health and well-being especially with regard to housing, overcrowding and environmental sanitation.	X	X	X	X
J. POPULATION SIZE AND COMMUNITY HEALTH SERVICES AND FACILITIES	1. Trends in the increase of school population, number of health workers and number of health facilities.*	1. To realize the importance of preventive health services in relation to environmental sanitation.	X	X	X	

CONCEPTS	SUB-CONCEPTS	OBJECTIVES	GRADE LEVEL			
			Elementary		Middle Level	High School
			Lower	Upper		
	2. Population growth and its relation to community health workers and health facilities (ratio of population and beds in hospitals, ratio of population and number of physicians, etc.) 3. Improving health services (hospitals, physicians, community health centre, school health.) 4. Modern health measures. 5. Optimum level of basic health services. 6. Activities of health organization.	1. To realize the importance of preventive health services in relation to environmental sanitation. 2. To relate that population growth affects the availability and use of health services in the community. 3. To make a survey of number of community health services and facilities and its ratio to the community users. 4. To determine the optimum level of basic health services vis-a-vis population size.				
K. SEX EDUCATION	1. Manifestations of the sex drive. 2. Factors that influence the development of sex attitude and behaviour. 3. Importance of wholesome sex attitude and behaviour.	1. To develop understanding and appreciation of the sex drive as a natural aspect of growing up. 2. To explain the various factors that influence the development of sex attitude and behaviour. 3. To realize the importance of wholesome sex attitude and behaviour. 4. To develop an ability to rightly adapt oneself to bodily change of one's sex through the bodily and mental changes of the adolescent.				

CONCEPTS	SUB-CONCEPTS	OBJECTIVES	GRADE LEVEL			
			Elementary		Middle Level	High School
			Lower	Upper		
		5. To develop the maintenance of good human relationship between male and female through reasonable knowledge on sex and family life.				x

CONCEPT : FOOD VALUES, FOOD GROUPS AND DAILY FOOD REQUIREMENTS

OBJECTIVES:
1. *To determine the nutritive value of food.*
2. *To determine the recommended food allowance for healthy living.*
3. *To compare the nutritional value of food that is bought with a fixed amount of money.*

GRADE LEVEL: UPPER PRIMARY

SCOPE & SEQUENCE NO.: II.A.1

Lesson 1

People should know the various nutrients that are required by the body and their functions. This is very essential for the healthy growth of the body. They should have knowledge of the food stuffs that contain the necessary nutrients required for the proper growth of the body. Mentioned below is the table that provides information on food items, nutrients and their value to the body.

Food items	Nutrients	What do they provide
1. Cooked rice and wheat Roti	Carbohydrates	Energy (heat)
2. Pulses, meat and eggs	Proteins	General body growth, muscle growth and energy.
3. Green leafy vegetables and fruits	Minerals	For growth of bones and formation of blood.
4. Vegetables	Minerals and Vitamins	Resistance to disease.
5. Milk and seeds	Complete food	Healthy.
6. Roots	Carbohydrates	Energy and heat
7. Oils and Ghee	Fat	Body Growth

Food Principles:

Food is necessary for the sustenance of life. But we should not take more or less than is required for the proper growth of the body. If we consume more food, it leads to indigestion. If it is less, we may feel weak or unenergetic. Every one must observe the food principles mentioned below to have sound health.

1. Take food at proper times in proper quantity.

2. Eat well-cooked food.
3. Drink water after taking food.
4. Do not eat snacks too frequently.
5. Do not eat food that is uncovered and fly-infested.
6. Do not over-eat just because the food is tasty.
7. Do not over-eat sweets.

A big family and a growing population would need more food than a small family and a small population. And because more people need more food, this often results in inadequate food supply.

Lesson 2

In this lesson, you will find out what the average Filipino's daily food intake is. You will learn to compute this with the recommended food allowance for healthy living. You will also learn to compare the calorie content of an average Filipino diet and that of one from a developed country like America or Australia.

The Different Kinds of Food and the Recommended Amount of Each

Kind of Food	Daily Food Intake of an Average Filipino (gm/day)	Recommended Food Intake for Each (gm/day)
1. Cereals	334	318
2. Yellow, leafy vegetables	17	68
3. Meat, fish, chicken, etc.	75	108
4. Milk and other dairy products	26	168

Choose the sentence that best interprets the table given.

a) The average Filipino eats all the kinds of foods according to their recommended amounts.

b) The average Filipino eats all the kinds of food in extra amounts.

c) Except for rice and cereals, the average Filipino eats the other kinds of food in inadequate amounts.

d) The average Filipino eats all the kinds of food in almost the right quantity.

Perhaps, by now, you realize that the average Filipino eats food in inadequate amounts except rice and cereals. Let us see how this deficiency is shown in the calorie content of the food.

Foods may be measured in calories. A calorie is the unit of food value which gives a measure of the energy that the food can produce. For example, a cup of milk contains 166 calories while an ordinary slice of meat contains 275 calories. The average adult needs 2,200 calories a day to remain healthy and strong.

Answer the following questions:

1. What do we use to measure food value? _____
2. How much of this is needed daily by an average adult to remain healthy and strong? _____

The average Filipino takes in an average food value of 1,672 calories a day.
The average Australian takes in an average food value of 3,200 calories a day.
The average American takes in an average food value of 3,300 calories a day.

It is recommended that an average adult gets an average food value of 2,200 calories a day.

Answer the following questions:

1. Who gets more than the right amount of food value daily? _____
2. How many more calories does an average Filipino need to meet the 2,200 calories needed daily? _____

Lesson 3

Objectives: To compare the nutritional value of food that is bought with a fixed amount of money.

The market prices of 3 or 4 basic foods (such as rice, corn, a vegetable and a type of fish) are shown and discussed with the class. Students are divided into small groups (of 4 or 5). One half of the groups are told that, with a fixed amount of money (the teacher should specify a realistic amount for one family), they must plan to buy food for one meal for five people. The other students, with the same amount of money should make an itemized meal plan for ten people. When these are completed, the plans should be compared in class from two points of view:

Are the meals as nutritious as possible based on the budget?

Will the five (or ten) people have enough to eat according to the meal plan?

Using the same amount of money, which group (five or ten people) will have the most nutritious meal?

Adapted from:

1. Philippines. Ministry of Education and Culture. Population Program. *RPG and food supply; a self-learning unit in population education for grade VI.* English translation of the original manuscript prepared by Adoracion N. Capunitan during the PEP-DEC-Unesco Workshop on the Co-operative Development of Self-Learning Units in Population Education, Marikina, Rizal, 12 January-20 February 1976. Manila, 1976, 27 p.
   - Food
   - Primary Level (grade 6)
   - Philippines.

2. Sri Venkateswara University. Population Studies Centre. *Population education - teaching units (primary level),* ed. by Sohanlal Nagda and others. Tirupati (India),1976, p. 30.
   - Health (Nutrition)
   - Standard 4 (primary level)
   - India.

CONTENT : FAMILY ROLE AND SIZE AND ITS EFFECT ON EMOTIONAL AND SOCIAL HEALTH

OBJECTIVES:
1. *To understand how the family contributes to the emotional and social health of its members.*
2. *To realize that family size may affect the emotional and social health of the members of the family.*
3. *To appreciate what one can do to contribute to the emotional and social health of the family members.*

GRADE LEVEL: PRIMARY

SCOPE & SEQUENCE NO.: II.B.i.

Lesson 1

1. Opener

How many members of your family go to work or go to school? What are your experiences when several family members are rushing at the same time to leave the house?

Today, let us see how well you can act out some situations wherein members of the family are all in a hurry to go to work or to go to school. Let us see if you can observe the behaviour of the family members being played. Be ready to tell how such behaviour affects the family members.

2. Development

Dramatize or act out the following:

1) It is 6:00 A.M. in the house of the Roma Family. Laura is inside the bathroom and is taking her time. Her father, sister, and her three brothers who are hurrying to leave the house are waiting to use the bathroom. One of the brothers keeps knocking the door and shouting at Laura to hurry up.

2) Mother is through with her morning chores before going to the office. Four of her children approach her for their pocket money, snacks, bags, books, etc. while two younger children are pulling her skirt to call her attention.

After the dramatizing, pupils are led to answer the following:

How did Father, Mother, and the children behave in each situation?

What do you think caused them to behave the way they did?

How did the family members feel?

What family roles which can contribute to good family relations were not followed?

(Since the roles to be played by the pupils are anticipated, additional questions to evaluate the role-playing may be added depending on what the pupils acted out.)

Let us go back and analyse the behaviour of the family members in the role-playing. (Stimulate pupils to answer the following:)

What do you think of Laura for taking too much time in the bathroom? Did Laura consider the feelings and needs of others? In this case, how can Laura contribute to good family relations? Suppose the brothers kept knocking at the door and shouting at the one inside, is their behaviour proper? Why? If there were just a few family members, do you think this problem will arise?

Let us now talk about Mother. What household chores did she finish before she went to work? What may become of Mother if she works too hard and does not get enough rest, sleep, or relaxation? Why do mothers or parents get easily angry or spank their children? Will worry, anger, sadness, or disappointment affect emotional and social health? How? Give some family rules which may contribute to harmonious relationship among family members.

If you do not get sick, we say that you are physically healthy. Now, if you can get along well with others, you can be healthy also. In what way? (socially healthy) And if you are happy because you are loved, accepted, and understood by your family and others, you do not easily get angry, and you do your work cheerfully. We say that you are also healthy. In what way? (emotionally healthy) Write these terms on the board: *emotional and social health*. When is a person emotionally and socially healthy?

You have observed in the role playing that the family can contribute to the emotional and social health of its members. Relate situations in your family which may affect emotional and social health. Remember what *emotional* and *social* mean.

Here are a few situations. After each situation, ask the class how it may affect the emotional and social health of the members of the family.

How should one behave or act in such situations?

1) If you feel that your brother or sister is trying to win the love of your father or mother by putting the blame on you for something you have not done, what would you do? Would it be right for you to cry? What is a better way so you would not have ill feeling towards your brother or sister or towards your parents?

2) Here are more situations: You need more money than what you used to get for everyday pocket money but when you ask your mother, her first reaction is to scold you. What would you do in this situation? Is your mother right in scolding you? Should you make her understand the reason for needing more pocket money?

3) Your mother and father have just arrived from work. You are asked to help in the preparation of supper but you are doing your homework. Should you cooperate with your mother? Would it be right if you do not listen to her because you want to finish your homework? In this case, how would your mother feel about you?

Lesson 2

1. Opener

Let's recall what happens to one's health if a person does not get enough rest, sleep, and relaxation.

Let's try to find out why in some families, the members do not get as much rest, sleep, and relaxation as the others.

2. Development

Let's say that we have two families. Let us call them the Boonmark and the Thongdi families.

The fathers in both families earn ₱350 a month each as factory worker. The mothers are both housewives and do not work to earn.

The Boonmark Family has three children: ages 11, 9 and 7 years. All three are in grade school. The Thongdi Family has six children. Three are ages 11, 9 and 7 years and are in grade school. The two younger ones are ages 5 and 3 years and the youngest is 1 year.

Let us list the activities of the two families and probably we can come up with something we can compare. You can work in two groups: one group to list the activities of the Boonmark Family and the other group those of the Thongdi Family. Perhaps you can work out a list of the activities of each of the two families, similar to the following:

Time	Activities in the Boonmark Family	Persons to do the Activity
In the Morning	Prepare breakfast.	mother
	Get ready for school.	children
	Breakfast	all members
	Feed the pigs and chickens	father

Ask the group to list the activities done by each member from morning until evening. Consider the members of the family, their ages, and the activity each member does.

After the two groups have finished the list, have the leaders of the group present their work on the board, which may look like this:

Activities in the Home of Two Families

Time	Boonmark Family	Thongdi Family	Persons to do the Activity
In the Morning	Prepare breakfast	Prepare breakfast	mother
	Get ready for school	Get ready for school	older children
	Breakfast	Breakfast	all members
		Feed the younger children	mother
	Clear the table and wash dishes	Clear the table and wash dishes	mother
	Feed the pig and chickens	Feed the pig and chickens	father
	Go to school	Go to school	older children
	Clean the house	Clean the house	mother
		Bathe the younger children	mother
		Bathe the baby	mother
	Wash clothes	Wash clothes	mother
	Prepare lunch	Prepare lunch	mother
	Etc.	Etc.	

After the two groups have finished the list, have them present their work on the chalkboard and lead the class to discuss based on the following questions:

> According to the list, which family has more work to do? Which has time for rest during the day? Which has longer hours for sleep? If there are young children in the family, how is the amount of sleep and rest of the mother affected? Which family will have time for relaxation, such as going on outings, visiting relatives, and entertaining visitors at home? Which family can give more attention to the children? To the parents themselves? What will happen if parents do not have the time for each other? For the children?

Some pupils will likely express the idea that if there are many children in the family, there will be more members to share in the work. Make them realize that while this is so, there will be more clothes to wash, more dishes to wash, more cleaning to do, etc. The parents will also have more problems to attend to.

> Why do you say that the Boonmark family has more time for rest, sleep, and relaxation?
>
> What then can you say as to the size of the family and the amount of time it has for rest, sleep, and relaxation?
>
> If the amount of time for rest, sleep and relaxation is affected by the size of the family, how will this affect the emotional and social health of the family? In other words, what will be the

effect on the person if he does not get enough rest, sleep, and relaxation? (He may get tired and once he is tired, he becomes irritable, lazy, cranky, etc. If he has no time for relaxation and is always occupied in his work, he will not be able to associate with other people, and make friends with them. When the family is large, the parents will have lesser time for each other and for the children than when the family is small.)

Adapted from: Philippines. Ministry of Education and Culture. Population Education Program. *Teacher's guide in population education for health education, grades 1-6*. Manila, 1975, 24-29.

CONTENT : COMMUNICABLE DISEASES

OBJECTIVES:
1. *To make the pupils realize the importance of control of communicable diseases in improving the quality of life of population.*
2. *To make the pupils understand causes of communicable diseases and their mode of spread.*
3. *To enable the pupils to learn the measures for the prevention of communicable diseases.*
4. *To develop appreciation of the role of different health services in controlling communicable diseases.*

GRADE LEVEL: MIDDLE/HIGH SCHOOL

SCOPE & SEQUENCE NO.: II.C.2

CONTENT

The Magnitude of the Problem:

Communicable diseases are hazards to public health. They contribute largely to the sickness in a population, reduce the life expectancy and cause large number of deaths in a nation. About two decades ago, seventy-five million people suffered from malaria alone every year in the Philippines. Out of this, about 0.75 million people died out of direct effect and 0.75 million were victims of indirect effect viz. being susceptible to respiratory diseases, specially tuberculosis. Besides malaria, other communicable diseases such as cholera, diarrhoea and dysentery, small pox, plague, respiratory diseases etc. took a heavy toll of deaths every year in the Philippines.

During the past twenty years or so, the government put in lot of effort to control the incidence of communicable diseases. As a result of effort, diseases like malaria, plague, small pox, cholera and others have been controlled to a large extent. Consequently death rate per 1000 population has come down from 27.4 during 1941-50 to 14.0 during 1966-70 and expectancy of life at birth has increased from about 32 years during 1941-50 to about 52 years during 1966-70. The population in a particular area and the public health facilities available to them are factors affecting the possibility of spread of communicable diseases. Although the government, corporations and municipalities have provided public health facilities for the control of communicable diseases, the facilities are inadequate and are not in proportion to the needs of the fast-growing population.

Causes and Mode of Spread:

Communicable diseases are communicated from person to person and are usually of four types Viz., air-borne, water-borne, insect-borne

and diseases spreading through contact. It is seen both in urban and rural areas that over-crowding, unhygienic habits of people, pollution of water etc. are some of the factors responsible for the spread of such diseases. Diseases like common cold and influenza spread readily in over-crowded places like over-crowded rooms, cinema halls, buses and railways. Cholera, diarrhoea and jaundice spread in epidemic form in big cities like Calcutta and Delhi due to pollution of drinking water. Diseases like small pox, mumps and measles spread rapidly in class rooms. Many unhygienic practices of people in villages and towns are also responsible for the spread of insect-borne diseases like malaria and filaria.

Methods of Control:

The government, municipalities and corporations are the agencies responsible for the control of communicable diseases. They provide medical and public health facilities. As precautionary measures, municipalities issue *notification* to alert people in times of any threatened epidemic. People are advised to take necessary precautions such as drinking boiled water, taking vaccination and inoculation. Sometimes, people suffering from diseases such as small pox are isolated and placed in quarantine. To minimise the chance of further spreading of the diseases, Inoculation and Vaccination campaigns are organized to protect the people. The articles used by patients in hospitals or health centres, are thoroughly disinfected before disposal. Wells and tanks used as a source of drinking water are disinfected by lime, potassium permanganate or bleaching powder by the health authorities. Film shows are organized to educate people about the nature of diseases, the mode of spread and type of co-operation needed from the community. Mobile health units are operated for the rural population to control the outbreak of disease. Persons who are carriers* of diseases like typhoid, cholera and dysentery are taken care of by the public health authorities.

Control of Communicable Diseases and Quality of Living:

The control of communicable diseases is one of the major factors determining the quality of population. It provides the following benefits:

a) Better health and vitality
b) Increased productivity
c) Better economic standards
d) Less expenditure on health services
e) Improved quality of life.

TEACHING HINTS

The material provided under content should be used to supplement the prescribed textbook, chapter on Communicable Diseases. The following activities are suggested for the purpose:

---

* Disease carriers:- They are persons who harbour the disease producing organisms without showing any signs or symptoms of the disease and who can still infect other individuals.

1. The magnitude of the problem should be explained to pupils by giving them statistics of various communicable diseases in different parts of India.

2. The pupils should be taken out to visit hospitals and health centres to observe the various methods of prevention of such diseases.

3. Suitable charts and posters illustrating hazards of over-crowding and unhygienic conditions should be prepared.

4. Encourage students to record symptoms and preventive measures of some important communicable diseases for ready reference.

5. Display some basic rules of personal hygiene and health habits on bulletin board periodically.

6. A talk on some aspects of communicable diseases by a medical practitioner followed by discussion can be arranged.

7. Mass media like film, TV and Radio should be used.

EVALUATION

1. What is the meaning of communicable diseases? Enlist such diseases known to you.

2. What is the need to create awareness about communicable diseases?

3. Prepare a chart by collecting the information from your text-book in the following:

Diseases	Symptoms	Causes	Preventive measures

4. In a given situation (a) how will you identify a communicable disease? (b) What precautions will you take?

5. How will you make your drinking water potable?

6. What health habits will you develop to ward off communicable diseases?

7. There has been an outbreak of disease like jaundice in your area. Which agencies will you want to contact?

Excerpted from: India. National Council of Educational Research and Training. Population Education Unit. *Teaching unit on population education.* New Delhi, 1973. (Instructional material series - 1), p. 107-110.

CONCEPT : TRENDS IN MORTALITY

OBJECTIVES: 1. *To understand the changes in mortality over a period of time.*
2. *To appreciate the factors that have contributed to mortality decline.*

GRADE LEVEL: UPPER PRIMARY LEVEL

SCOPE & SEQUENCE NO.: II.C.3

Day 1

1. Opener

Have you heard about some changes which have happened in our community since the time of your grandparents? What are the changes in the living conditions of the people? In the appearance of our community?

2. Development

Listen to the story that describes a town and how its people lived then and how they live now. Let us see if you can tell the different changes that took place in this town. (See Appendices A and B).

Mabunga today is a beautiful town, a pleasant and a healthful place to live in. In the past, this was not so.

Mabunga had a narrow, dusty road which led to the next town. Very few people went to the next town because there were few vehicles that would take them there. And it was very expensive to hire a caretela, a horse-drawn vehicle. There were very few trucks and buses. That was why not very many people went to other places.

The people of Mabunga were mostly farmers. They grew rice, vegetables, and some fruits. They also raised poultry and caught fish in the rivers. While they grew rice and other plants, they did not have enough food because their farming methods and tools were very old-fashioned compared to what are now used in modern agriculture. Besides, pests attac ed their crops.

Many families lived in nipa huts and a few in the poblacion lived in houses made of wood. Very few adults had finished the elementary grades, although they would have liked their children to finish high school, and even wished they could send them to the provincial capital or to the city to study.

The people of Mabunga provided for the basic needs of their families in the best way they could. Their meals were simple and consisted mainly of rice, fish, vegetables, and a meat dish once in a while. They got their water from shallow wells, and sometimes, from rivers and lakes. The people also washed their clothes, bathed themselves and their carabaos in these rivers and lakes. Sometimes they threw waste in the rivers and lakes.

Many homes did not have toilets. Some homes had dug pits or the Antipolo-type of toilet which is also a dug pit, except that it is elevated to the level of the house. Very often, people either buried their garbage in their backyards, burned it , fed it to hogs and fowls or simply threw it into rivers and lakes and in the fields.

There were no physicians, dentists, nurses, midwives, and other health workers in Mabunga. The nearest physician was in the next town. However, there were a few herbolarios, hilots, and quack doctors among the old folks. This being the case, many people died without ever being attended to by a physician.

Once, an epidemic of cholera hit the town which killed many people. Many people died, too, or were sick of tuberculosis and other communicable diseases. While many babies were born, there were also many people who died. Quite a number of infants born did not reach their first birthday. That was why parents generally had large families so that the children who died early could be replaced.

After many years, things began to happen in Mabunga. New roads were built which made most of the barrios easy to reach. Transportation facilities were improved and increased. It became possible for the townsfolk to go to other places and for the people from these places to come to Mabunga. There was an exchange of food products and other goods between Mabunga and other towns and cities. This market exchange brought wealth to the people and to the town.

A health centre was built in the poblacion or centre of the town. The health workers taught people about disease prevention, environmental health, nutrition, and also about the health of mothers and children. The sanitary inspector went around the town and told people to build sanitary toilets, put up artesian wells and to dispose of garbage properly.

At the same time, other community development workers helped the people to improve their living conditions. They taught them how to use modern agricultural tools and methods in order to produce more and better food products.

Schools were also built in the town. Children were eager to go to school. Teachers were happy to help children learn many things.

Mabunga has indeed become a beautiful and healthful town. The people of Mabunga were very proud of their own.

For added interest appeal to the story, illustrate it on a flannel board as it is told or prepare a movie reel based on the story.

Discussion questions.

How many people, do you think, were in Mabunga at the start of our story? (Since no figure is given in the story, accept any guess over 1,000.)

If the population of Mabunga has increased to 5,000 within a period of 70 years, do you think very many new people were added to its population each year? Why or why not?

Why was the number of deaths in Mabunga very high? In other words, why did many people die?

What diseases caused many deaths among the people? (If pupils give communicable diseases as the answer, encourage them to give examples of such diseases.)

Explain how these factors contributed to the high death rate of the community.

What factors in the living conditions of the people contributed to the high number of deaths?

Can you recall what things happened in the town of Mabunga after many years?

What could be the other effects, especially on the health of the people, of roads and transportation aside from making it possible for people to travel?

What do you think will happen in Mabunga if people continue to have medical and other health services?

How do medical and other health services affect the population of the town? What will happen to the number of deaths? Will there be better chances for all the people to live longer? Why?

Day 2

As an enrichment activity, and to make the lesson more functional and meaningful, present a similar graph on estimated birth, death, and natural increase in the local community, where data over a period of time, preferably a twenty-year or more period are available. Similar discussion questions used in the previous chart may also be used.

Local demographic data can be obtained from the civil registrar's office in the province, municipality, or city.

Calling attention back to the death rate in 1903, ask:

How would you describe the death rate in 1903? What caused the high death rate during this year?

Encourage pupils to get clues to the answers from the story of Mabunga.

Present pictures depicting the following:

1. Malnutrition
2. Food shortage, e.g. famine
3. Epidemics
4. Unsanitary conditions, e.g. dirty surroundings, unsafe water supply, rat and insect infestation, etc.

Have the pupils talk about the pictures and from these make deductions as to the causes of high death rate.

Have pupils read from the chalkboard or chart excerpts from a report on "General Inspection of Houses, Premises, Vaults, etc. with Improvement Ordered, Disinfected, Whitewashed, Cleaned, etc. by Medical Inspectors, Sanitary Inspectors, and Assistant Inspectors" taken from the *Annual report of the Bureau of Health for the Philippine Islands* by Victor Heiser, M.D., Director of Health, July 1, 1907 to June 30, 1908.

Excerpts of said report are as follows:

Inspection of houses by the sanitary inspectors	33,441
Inspection of houses by the assistant sanitary inspectors and sanitary policeman	279,449
Houses ordered cleaned (written)	740
Houses ordered cleaned (verbal)	50,126
Houses cleaned	60,759
Houses ordered whitewashed and painted	887
Houses whitewashed and painted	114
Number of houses disinfected	6
Number of houses condemned and removed	7
Number of houses where garbage has not been removed for two days	885
Yards ordered cleaned	25,807
Yards cleaned	25,404
Cesspools and vaults ordered cleaned	2,606
Cesspools cleaned	1,829
Number of rats caught	838
Number of cholera cases found dead	234
Number of cholera cases found alive	191
Number of smallpox cases reported	171

From this report, have the pupils describe the sanitary conditions existing in the City of Manila during the period 1907-1908.

Unlock difficult words before taking up the report.

Guide questions:

From the various items in the report, what can you say about the sanitary conditions in the city of Manila in the past?

Could these sanitary conditions be true of many parts of the country during the period 1907-1908? Why?

Why did sanitary inspectors inspect houses, order houses cleaned, whitewashed, or painted?

Could these sanitary conditions be related to the cholera and smallpox cases reported during the period? Why?

What is the relation between communicable diseases and poor sanitary conditions?

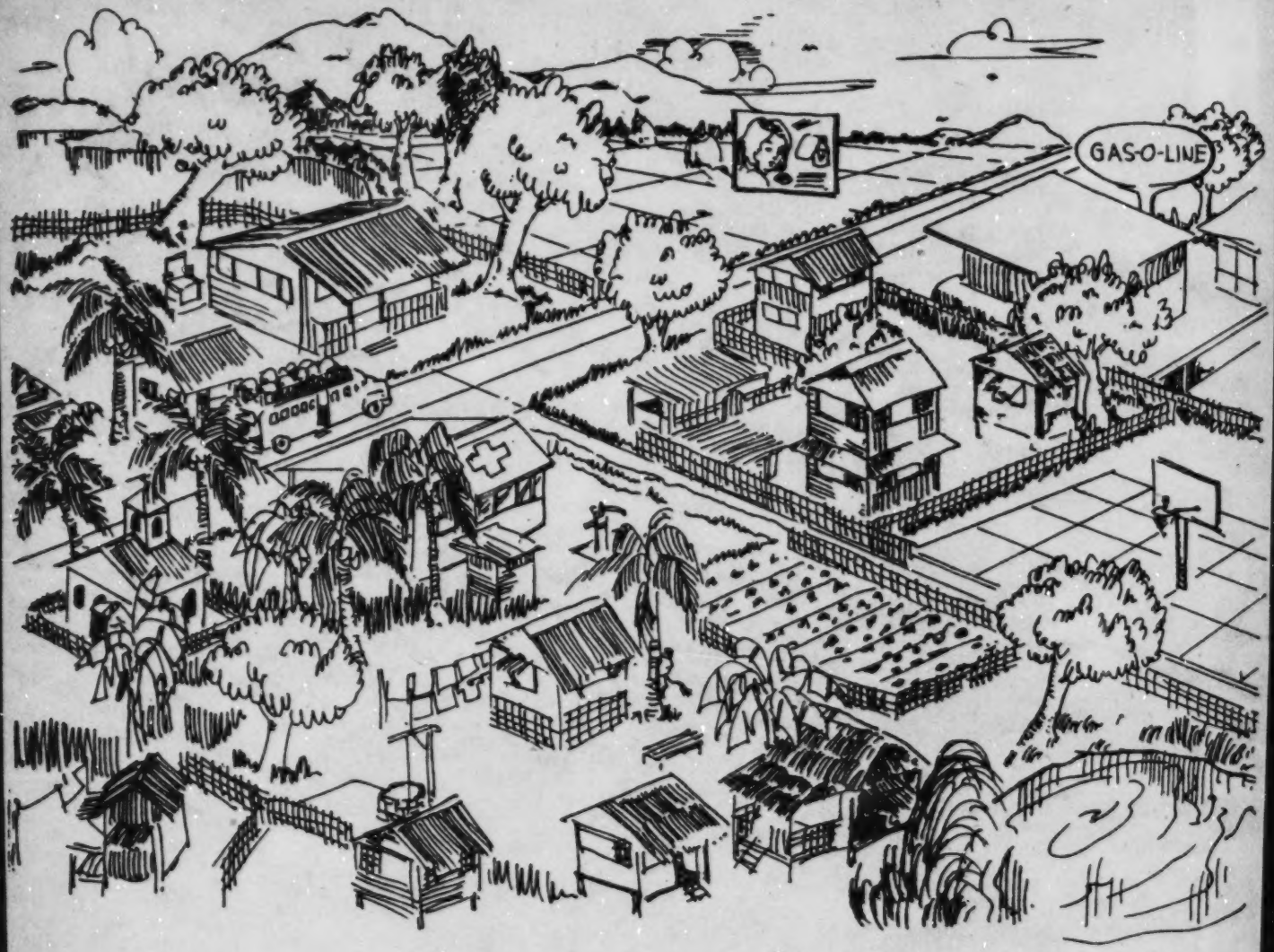
3. Summary of ideas learned

Ask the children to summarize the ideas developed from the lesson. They may give the following basic ideas or conclusions:

1. The sharply declining death rate is one of the causes of rapid population growth or population explosion.
2. The trend in death rate in the Philippines is from high to a sharply declining one.
3. There are causes for the high death rate in the past, like food shortage, famine, malnutrition, epidemics, and poor living conditions.

Excerpted from: Philippines. Ministry of Education and Culture. Population Education Program. *Teacher's guide in population education for health education, grades 1-6.* Manila, 1975, p. 45-49, 56-57.

APPENDIX A



APPENDIX B

CONTENT : HYGIENE FOR YOU AND YOUR COMMUNITY

OBJECTIVES:
1. *To make the pupils understand the principles of personal hygiene.*
2. *To inculcate in pupils the habit of maintaining personal hygiene.*
3. *To enable the pupils to understand the impact of personal hygiene on community hygiene and its role in the promotion of national health.*
4. *To make the pupils realize their responsibility of maintaining community hygiene.*

GRADE LEVEL: LOWER PRIMARY

SCOPE AND SEQUENCE NO.: II.D.2; II.D.3

CONTENT

(A) Meaning of hygiene - personal and community:

Hygiene is a science of health. It deals with cleanliness, development of healthy habits, proper clothing, sanitation, diseases, etc.

Personal hygiene is concerned with hygiene of the individual. It deals with two aspects of individual hygiene -

1) Personal cleanliness of different parts of the body like ears, teeth, nose, throat, eyes, hands etc. and
2) Certain personal factors that are conducive to healthful living like work, rest, exercise, sleep, food habits, drinking habits, clothing habits etc.

Community hygiene deals with the hygiene of an organized group of individuals. It is concerned with hygienic aspects such as water supply, food, nutrition, sanitation, housing, control of communicable diseases, prevention of accidents etc. Community facilities as mentioned above need to be increased in proportion to population growth. It is the responsibility of every member of the community to utilize and to maintain them properly.

(B) Factors of personal hygiene:

1. Clearing of bowels.
2. Cleanliness of teeth.
3. Washing of mouth, face and eyes.
4. Washing of hands and feet.
5. Taking bath.
6. Taking care of ears, nose and throat.
7. Change of clothes.
8. Combing hair.
9. Exercise.

10. Posture and gait.
11. Taking food.
12. Attending to vocation.
13. Adequate rest and sleep.
14. Drinking and smoking.
15. Recreation.

(C) Formation of healthy habits:

1. Early to bed and early to rise.
2. Regular exercises.
3. Regularity in taking care of different parts of the body.
4. Avoid addiction to drugs, narcotics, tobacco, alcohol etc.
5. Good eating habits, washing hands, and regularity in taking required quantity of food.
6. Avoid spitting, sneezing, and coughing in public places.
7. Judicious use of sanitary facilities in public places.
8. Development of proper posture and gait.
9. Regularity in work, rest, sleep, exercise and recreation.

(D) Necessity, use and maintenance of facilities for community hygiene:

Provision of sanitary facilities like urinals, dust-bin etc. at public places is a basic necessity. In the absence or insufficiency of such facilities, people make indiscriminate use of public places which may result in unsanitary conditions leading to the breeding of flies, mosquitoes and other pests. This may help to spread communicable diseases specially in view of rapid population growth resulting in overcrowding in cities, towns, conveyances and public places.

It is often observed that public facilities, though available, are not used fully or used improperly due to lack of proper attitude on the part of the users. The available facilities should be used fully, properly and for the purpose for which they are meant. The facilities should also be maintained properly after their use.

(E) Inter-relationship between personal hygiene, and promotion of national health:

Community is a group of individuals, living together in a more or less identical environment, with common interests, aspirations and ambitions. Thus health of the community which in turn is the indicator of the health of the nation depends on hygienic habits practised by individuals. Thus the individual's hygienic habits determine the health of the family, community and country at large. Consequently proper hygienic habits are of paramount importance not only from the point of view of an individual but also for the promotion of national health which is a contributing factor to the improvement of quality of life of a nation.

TEACHING HINTS

1. The idea that a nation is strong if her citizens are strong should be stressed.

2. The understanding of relationship between personal hygiene and community hygiene in raising the level of health status of the population should be developed.

3. Films and film strips relating to personal and community hygiene may be shown.

4. Visits may be arranged to:
   1) Slum area
   2) Planned colony
   3) Public places.

5. Charts and posters showing the condition of public places like railway station, bus-stand, cinema houses, public gardens may be prepared.

6. Plans of modern sanitary system at home and in public places may be shown.

EVALUATION

1. What do you understand by personal hygiene?

2. What is the relationship between personal hygiene and community hygiene?

3. What are the factors that contribute to personal hygiene?

4. What basic facilities do you provide while constructing a new house?

5. Prepare a list of sanitary rules to be observed for putting up at public places.

6. What suggestions do you give to your Panchayat or Municipality to improve the sanitary conditions of your village or town?

7. How do you plan to observe cleanliness week in your school?

8. How does personal hygiene contribute to the improvement of health of family, community and nation?

9. What healthy habits do you like to develop in children and how?

Excerpted from: India. National Council of Educational Research and Training. Population Education Unit. *Teaching units on population education.* New Delhi, 1973. (Instructional material series - 1), p. 102-105.

CONTENT : MORTALITY

OBJECTIVES: 1. *To enumerate the causes of high death rate.*
2. *To explain the factors which contribute to mortality decline.*

GRADE LEVEL: HIGH SCHOOL/SECONDARY

SCOPE & SEQUENCE NO.: II.G.2; II.G.3

Lesson I

B. Development

1. Play a word game.

HIGH MORTALITY	LOW MORTALITY
Epidemic diseases	Immunization
Food shortage	Progress in medical science
Famine	Sterilization
Malnutrition	Personal cleanliness
Poor sanitation	Social reforms
Inadequate personal hygiene	Improved agricultural techniques
Lack of sanitary facilities	Change from home handicraft to machine factory
Cholera	Improved sanitation
Smallpox	Improved transportation
Bubonic plague	Child labor laws
Poor water supply	Water purification
Poor sewage disposal	Hospitals and clinics
Insect pests	Sanitary sewage disposal
Typhus fever	Improved nutrition
Crop failure	Food distribution
Rat infestation	Increased food production
	More and better kinds of products.
	Antibiotics
	Surgery

Instructions to the teacher: Write the words in the lists above on strips of paper (size: 3" x 11", preferably colored paper). Put all strips together and shuffle.

Prepare a stick or tack board with 2 columns. Two pocket charts will do. Label one column, HIGH MORTALITY: the other, LOW MORTALITY.

Directions for the game: Ask students to pick one strip, read it and stick or tack it on the tack board or place it in the pocket chart under the appropriate column. More than one student may be called at a time.

After the students have completed the game, ask them to analyze the 2-column word list. Encourage them to classify these words into groups or categories. Hopefully, the class would come up with something like the following:

CAUSES OF HIGH MORTALITY

1. Epidemic diseases
   a. Cholera
   b. Smallpox
   c. Bubonic plague
   d. Typhus fever
2. Food shortage
   a. Famine
   b. Malnutrition
   c. Crop failure
3. Poor sanitation
   a. Inadequacy of sanitary facilities
   b. Poor water supply
   c. Poor sewage disposal
   d. Insect pests
   e. Inadequate personal hygiene

CAUSES OF MORTALITY DECLINE

1. Progress in medical science
   a. Immunization
   b. Surgery
   c. Hospitals and clinics
   d. Antibiotics
   e. Sterilization
2. Improved sanitation
   a. Water purification
   b. Sanitary sewage disposal
   c. Personal cleanliness
3. Social reforms
   a. Child labour law
4. Improved agricultural techniques
   a. Increased food production
   b. Improved nutrition
5. Change from home handicraft to machine factory
   a. More and better kinds of products
6. Improved transportation
   a. Food distribution.

For the next activities, assign students to read and interview any knowledgeable person they are acquainted with on the causes of high and low mortality. Check the list prepared by the class against the information obtained. Focus attention on the relationships of the events and factors listed to high and low mortality.

Excerpted from: Philippines. Ministry of Education and Culture. Population Education Program. *Teacher's guide in population education for health education, first year-fourth year*. Manila, 1975, p. 26-27.

CONTENT : FOOD, HEALTH, HOUSING AND PRODUCTIVITY

OBJECTIVES:
1. *To realize the influence of food, health, and housing upon productivity.*
2. *To develop understanding about the relationships between health, food, housing and productivity.*

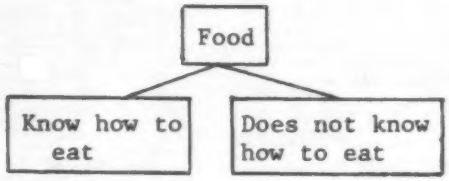
GRADE LEVEL: LOWER PRIMARY

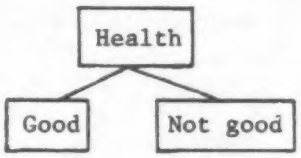
SCOPE & SEQUENCE NO.: II.I.1; II.I.2

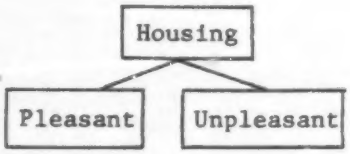
The teacher puts heading cards on the bulletin board

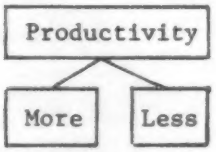
Food Health Housing Productivity

Then the teacher gives each pupil a word card. Pupils study the cards and decide to which of the four headings the cards correspond, then place cards under appropriate headings. Then the teacher and the pupils check whether each card is appropriately placed. In each of the four headings, the teacher places two more classification cards as sub-headings.









Then the teachers give the pupils more cards and ask them to appropriately place them in the new sub-heading. Then the teacher helps pupils to check word cards in each column to see if they are correctly placed.

Attached is how the chart should look.

Pupil's finished charts should be as follows

First Chart		Second Chart		Third Chart		Fourth Chart	
Food		Health		Housing		Productivity	
Know how to eat	Does not know how to eat	Good	Not good	Pleasant	Unpleasant	More	Less
1.1 Eat moderately	1.1 Eat too much or too little	2.1 Good tempered	2.1 Bad tempered	3.1 A house not far from bus-stop, market, school	3.1 A house near factory, noisy.	4.1 Fast harvesting	4.1 Slow harvesting
1.2 Eat healthy food.	1.2 Eat unhealthy food	2.2 Strong, robust	2.2 Exhausted, weak	3.2 A house is tidy, in good order	3.2 An untidy, dirty house	4.2 Be able to fish all day without being exhausted	4.2 Be able to fish only half a day.
1.3 Be able to eat all kinds of food	1.3 Be selective in eating	2.3 Cheerful	2.3 Often get headaches	3.3 Having a bedroom where one can really rest	3.3 Having a bedroom where one often gets disturbed	4.3 Be able to carry 50 ricesacks a day	4.3 Be able to carry 30 ricesacks a day
1.4 Chew food well before swallowing it.	1.4 Eat quickly, do not chew food well	2.4 Having no worms in the body	2.4 Having worms in the body	3.4 Everybody in the house has his or her own corner for personal belongings	3.4 Personal belongings are mixed up	4.4 Be able to sew two dozen clothes	4.4 Be able to sew ½ dozen clothes
1.5 Be in good mood, while eating	1.5 Be in bad mood, while eating	2.5 Not often get sick	2.5 Often get sick	3.5 All the children help with housework	3.5 The children do not help with housework	4.5 Be able to type 10 pages an hour	4.5 Be able to type 5 pages an hour
1.6 Healthy food makes a person clever	1.6 Unhealthy food makes a person dull	2.6 Not having a cold	2.6 Having tuberculosis	3.6 Everybody in the house is happy	3.6 Everybody in the house constantly quarrels	4.6 Be able to do a weave 7 metres of cloth a day	4.6 Be able to weave 5 metres of cloth a day
						4.7 Be able to do a large amount of washing	4.7 Not be able to do the washing

Adapted from: Thailand. Ministry of Education. Department of Educational Techniques. Curriculum Development Centre. *Learning unit on population education, grade IV (Prathom IV).* Bangkok [1976], p. 21-22.

CONTENT : POPULATION SIZE, SCHOOL HEALTH PERSONNEL AND COMMUNITY HEALTH SERVICES

OBJECTIVES:
1. *To realize and explain that the need for school health personnel and health facilities increases as the school population increases.*
2. *To understand and discuss how population size affects the quantity and quality of health services in the community.*

GRADE LEVEL: PRIMARY

SCOPE & SEQUENCE NO.: II.J.1; II.J.2

Lesson 1

Opener

Have the children recall the different health facilities and health personnel in school. Then say:

> I am going to show you some pictures about these health facilities and health personnel.

Development

Display several pictures showing a long line of pupils at the school clinic, toilet, drinking jars, and hand-and-foot-washing facilities. Show also a picture of pupils crowding around a seesaw on the playground. Be sure to display only the pictures of health facilities available in the school.

> Why do you think there is a long line of pupils at the school clinic? At the toilet? Drinking jars? Do they happen in our school? Why? Let us find out if the reasons you have given are true.
>
> Two days ago, you were assigned to gather data on the number of health workers and health facilities in our school. Are you ready to report today? (Address this question to the group assigned to work on these data.)

Group Assignment

Group assignments should be given before the unit is initiated. The school principal can be interviewed regarding the data on school health workers and health facilities, and school population for the years being compared. One group may examine school records. Another group may conduct a survey of health agencies and their health workers in the community.

Still another group may visit the civil registrar's office and the municipal or local health office for data on the population and health

workers, such as physicians, dentists, nurses, sanitary inspectors, etc. in 1960 and in 1970.

Group Reporting

The group leader may present his report in the form of a table which can be written on the chalkboard or on a piece of cartolina. During the giving of assignments, the items of the table under the different columns should have been discussed with the group assigned to report. The table may look like the one below.

OUR SCHOOL POPULATION, HEALTH WORKERS, AND HEALTH FACILITIES

	NUMBER		INCREASE
	1963	1973	
School population			
(1) Personnel			
(2) Boys			
(3) Girls			
Health Workers			
(1) No. of school physicians			
(2) No. of school dentists			
(3) No. of school nurses			
Facilities*			
(1) No. of toilet bowls			
Boys			
Girls			
(2) No. of urinals			
(3) Drinking fountains			
(4) Drinking jars			
(5) Foot-washing facilities			
(6) Hand-washing facilities			
(7) Playground apparatuses			
Swings			
Seesaws			
Slides			

* (Exclude the unusable facilities, e.g. unserviceable toilet bowls, urinals, faucets. Update the year to the current one; make the time interval a ten-year period.)

Study the table very carefully. What is the table about? What is the school population in 1963? In 1973? Is there an increase? By how many? How many physicians, dentists, and nurses were there in 1963? In 1973? What can you say about the number of health workers in 1963 compared to that in 1973? What is the increase in ten years' time of the number of different health facilities? What can you say about the increase in ten years of the school population compared to that of the number of health workers? To that of the number of health facilities? What do you think will be the effects of this situation particularly on the health of the pupils?

Summary

Tell the class in two or three sentences what you have learned from today's lesson.

Statements of ideas like the following may be drawn from the pupils.

1. While there is a big increase in the school population, there is little or no increase in the number of health workers and health facilities.

2. A big school population with too few health workers and health facilities causes great inconvenience to pupils and may affect the pupils' health.

Lesson 2

Yesterday, we studied the table showing our school population, health workers, and facilities in 1963 and in 1973.

Let us find out if the number of school health workers and school health facilities in our school are adequate. If they are not, how many more are needed to make these adequate for our school population?

On the chalkboard we have the "Standard Ratio for School Health Workers, and Health Facilities."

What do we have in each column?

What is the standard ratio for each item?

Let us fill in the blanks under "Actual Situation," columns 4 and 5.

Based on the standard ratio indicated in the table, let us find out if we have an adequate number of health workers and health facilities.

Based on the table, how many physicians are needed for a pupil population of 5,000? How many dentists? Nurses? Continue doing the same for the other health workers and the health facilities. Let us fill in column 6.

Based on the data in the column "Needed" which we have just filled, can you tell whether the number of health workers and the number of health facilities in our school are adequate or not? Which items in the table are adequate or inadequate? Let's fill in columns 7 and 8. What could be the causes of the inadequacy of the number of health workers and health facilities in our school? What could be the effects of inadequate health service on the health of the school population? Do you think we would have enough toilets, drinking jars, hand-washing facilities if we had fewer pupils in our school?

Standard Ratio for School Health Workers
and Health Facilities

ITEMS	No. of Pupils	Standard Ratio	Actual Situation		Needed Health workers/ facilities	Adequacy	
			No. of workers/ facilities	No. of Pupils served		Adequate	Inadequate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
I. School Health Workers							
1. Sch. Doctor	5,000	1					
2. Sch. Dentist	10,000	2					
3. Sch. Nurse	15,000	3					
	20,000	4					
	25,000	5					
II. School Health Facilities							
1. Drinking	50	1					
fountain or	100	2					
drinking jar	150	3					
	200	4					
	250	5					
2. Toilet Bowls	30	1					
(Girls)	60	2					
	90	3					
	120	4					
	150	5					
3. Urinal Bowls	50	1					
(Boys)	200	2					
	300	3					
	400	4					
	500	5					
Toilet Bowls	50	1					
(Boys)	100	2					
Foot-washing	150	3					
Facilities							
Hand-washing							
Facilities	200	4					
Playground	250	5					
Equipment							

Sources:

The standard ratio of school health workers to pupils is taken from *School Health Manual for Administrators* prepared by the School Health Coordinating Office, Department of Education, Manila, 1970, p. 14.

The standard ratio for school health facilities to pupils is taken from *Field Manual for Sanitary Inspectors*, prepared by the Division of Environmental Sanitation, Bureau of Health Services, Department of Health and the Department of Public Health Engineering, Institute of Hygiene, University of the Philippines, 1963, pp. 177-178, with financial assistance from the United Nation's Children's Fund.

Lesson 3

Opener

Who are the health workers in our school? What do they do to help us keep healthy?

In the community, there are people who help us keep well. There are also people who help us get well when we get sick. Often, different groups or agencies work to improve the health of the entire community. Let us find out how much you know about the health workers and the health groups or agencies in our community.

Development

Today we shall list down the local community health agencies which contribute to improve health in our community. We shall also specify the kind and number of health workers in each agency.

Ask the assigned group to report on the health agencies in the community and the number of health workers in each agency. The group can present its report in the form of a table like the one below which may be written on a piece of manila paper, or on cartolina or on the chalkboard.

Health Agencies	Physician	Dentist	Nurse	Midwife	Sanitary Inspector
Rural Health Unit	1	1	1	1	1
Puericulture Centre	1		1	1	
Family-Planning Clinic	1		1		
Private Clinics	2	3	2	2	
Hospitals	3		4	2	
Totals	8	4	9	6	1

After the report, ask the following questions:

What are the health agencies in our community? How do they help improve the health of our community? Who are the health workers in each agency? How do they help the people in our community? Which agency has the biggest number of physicians? Dentists? Nurses? Midwives? Sanitary Inspectors? Do you think that our community has an adequate number of health workers? Why?

Aside from the physicians, nurses, midwives, dentists, and sanitary inspectors are there any other people in our community who help people when they get sick or are in need of medical help? (The children may mention the herbolaryo (herb doctor), the hilot (untrained midwife) and the manghihilot (one who treats pilay or dislocation of bones or

sprains.) Should you go to these people for medical help when there are physicians, nurses, and trained midwives in the community? Why or Why not?

Opener

Recall what the class had discussed in the previous lesson.

Development

Ask the group assigned to gather data on the population and number of health workers in our town to give their report. They may give their report in the form of a table like the following:

Year	Population	Physician	Dentist	Nurse	Midwife	Sanitary Inspector
1960	(13,543)	(3)	(4)	(1)	(1)	(1)
1970	(18,285)	(3)	(6)	(1)	(2)	(1)

Have the pupils use the table in answering the following questions:

What was the population size of our town in 1960? Was there an increase in the population in 1970? By how many? What was the number of physicians, nurses, midwives, dentists, and sanitary inspectors in 1960? Was there an increase in 1970? Do you think that the number of physicians, dentists, nurses, midwives, and sanitary inspectors is adequate for the health needs of our town? How will this affect the health of the town?

How many more physicians and dentists are needed in our community so that the people can have prompt and adequate health service? What about the number of midwives, nurses, and sanitary inspectors? Why is there an inadequate number of these health workers in our town?

The class may give the following answers:

1. The population grows so fast that it becomes difficult for the government to provide adequate social services, like medical assistance to people.
2. Most physicians, dentists, nurses, and midwives like to work in the cities rather than in the rural areas.
3. Many physicians, dentists, nurses, and midwives migrate to other countries to work there rather than stay in our country to serve here.

At this point the following information may be given to the class: 40% of Filipino physicians are abroad; 20% are in Manila; 13% are in other cities; 27% are scattered in other areas in the country. One-fourth of all towns do not have a single physician and 370 municipalities have only one physician. Ask the class what they think the effects of this situation are.

Excerpted from: Philippines. Ministry of Education and Culture. Population Education Program. *Teacher's guide in population education for health education grades 1-6.* Manila, 1975, p. 34-40